

JULY  
1951

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# Amateur Radio

JOURNAL OF  
THE WIRELESS  
INSTITUTE OF  
AUSTRALIA

For the Experimenter  
and Radio Enthusiast



9D.

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**EDITORIAL****"Will The Suppression of Radio Interference Ever Come To Pass?"****EDITOR:**

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For years and years successive Governments have toyed with the problem of standardising the railway gauges throughout the Commonwealth with a view to firstly, the great economic value of such a scheme, and secondly—but of an infinitely greater importance—the immeasurable advantage to the defence requirements of our country. However, this vitally necessary change is still unaccomplished. Had it been carried out years ago the cost to the Commonwealth would have been vastly less than the astronomical figure envisaged today.

This may appear to bear little relationship to our interests, which are confined to the field of radio transmission and reception and electronics generally, until one recalls that we have a similar problem to face in the ever increasing "man-made radio interference."

Prior to World War II the authorities were only interested in the problem insofar as it affected the broadcast listener and/or the commercial communications circuits. During the war the problem was brought to the front again with the great concern given to it by the Defence Services. But in spite of this, and in spite of the fact that great strides were made in the science of radio transmission and reception over these years, no major "attack" was made on the problem of interference of a man-made nature—and nothing has been done since!

With due respect, the Wireless Branch of the Postmaster-General's Department has rendered valuable service to the public and the Services in the elimination of interference problems insofar as the limitations of existing legislation will permit them, beyond which authority they cannot be expected to act.

Today the problem is becoming more and more urgent with the rapid expansion of the electronic art

encompassing highly specialised and sensitive high frequency equipment used both commercially and militarily, more sensitive domestic receivers, and—of great importance within the next few years—television. With the advent of television, will come interference problems hitherto unknown in this country and the responsible authorities are going to eventually face an irate public if steps are not taken now to eradicate man-made electrical interference.

But of paramount importance is the need for the elimination of such interference as part of our defence preparation because in time of war sites for defence installations cannot be chosen with a view to freedom from interference, but must be where circumstances may demand. The elimination of man-made interference may well prove to be a vital factor in defence should there be another world war, bearing in mind the knowledge we have of the sometimes unsurmountable interference communications had to contend with during the last war.

We say without fear of contradiction that present legislation is inadequate to deal with the problem and that the case demands immediate and courageous action by the Government. The problem must be attacked on the highest political level and the fact that the taxpayer will be involved insofar as he will have to bear the cost of the complete overhaul of the existing electrical undertakings should not deter legislators from initiating an immediate programme of action.

The time has arrived when we feel that nothing further will be achieved by increasing the pile of correspondence already on Government files—only concerted action by those vitally concerned with the elimination of this problem can give impetus to the required legislation.

—FEDERAL EXECUTIVE.

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Brand new genuine Kingley 455 Kc. L.F. Transformer. As illustrated, cut to only 7/11.



"Radio and Hobbies" Car Radio Kit as described in May, 1949, issue. Homecrafts offer this kit complete to the last nut and bolt. Price, as illustrated, 22 Gns., including Sales Tax.

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**Central 4311**

# A System of Voice-Controlled Transmitter and Receiver Switching

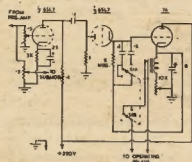
BY A. J. VERTIGAN,\* VK3WR

For rapid break-in and ease of operation it was considered that voice operation of the transmitter and receiver switching would have advantages. Many methods of operation can be devised, but the one to be described can be installed in any relay operated rig without major alterations.

Firstly it is necessary to have relay control of the oscillator, r.f. stages, modulator and antenna change-over. The receiver must also be connected to the system as well. In this case the h.t. feed to the i.f. and r.f. stages is relay controlled. Immediately the transmitter goes off the receiver comes on without any time delay. These relays are, for normal operation, controlled by a switch on the receiver panel. For voice control, another relay, the contacts of which are parallel to the switch is used.

The output of a crystal microphone feeds a two-stage pre-amplifier, consisting of a 6F5 and a 6C3. From this pre-amplifier the output feeds normally to the sub-modulator. It also feeds into one side of a 6SL7 triode through a gain control, which in fact becomes a sensitivity control. The second section of the 6SL7 is connected as a diode and connects through the coupling condenser to the grid of the control tube, type 76. A one megohm resistor is

placed from the plate of the diode to ground to discharge the coupling condenser. The cathode of the control tube 76 has the relay operating coil and a 10,000 ohm variable bias resistor in series to ground and by-passed by an 8 uF. condenser.



The time constant components from the grid to the cathode of the 76 are most important. The resistor is 5 meg. A three position switch (S1A-B) is employed to switch the unit into operation and also to change the time constant condensers. The first position cuts the circuit through the relay contacts. The second position closes that circuit and switches the 0.1 uF. condenser across the

grid of the 76. The third position replaces the 0.1 uF. with a 0.5 uF. condenser.

With the 0.1 uF. condenser in use, the relay holds closed during normal sentences, but opens immediately speech ceases. With the 0.5 uF. condenser the time lag is much longer. The first position is useful for rapid break-in work, and where such rapid work is not required the second condenser can be used.

The relay used is a small job from disposals and operates on a current of about 2 Ma. (from squelch circuit of 522 receiver).

The adjustment of the equipment is as follows: Set the plate current of the 76 so that the relay contacts are open and an increase of about 1 Ma. will close them. Open the sensitivity control so that normal speech about three inches from the microphone will close the relay. It will be found that adjusting the 10,000 ohm bias resistor will vary the time constant slightly, and this can be set for best operation consistent with the above remarks.

This system has been in operation only a short time and has created a certain amount of interest. The full advantages of voice operated switching can only be realised when two stations are using it in QSO. So, what about it, chaps?

\* 78 Queens Road, Melbourne, Victoria.

## "THE MATCH-MAKER"

BY C. A. CULLINAN,\* VK7XW

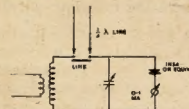
No, we are not running a matrimonial agency, so you can show this to the XYL without fear of being told to peel the spuds while she finds out how to marry off Matilda to that elusive Wilfred fellow.

In the design of many antenna systems it is necessary to use quarter wave lines and it frequently becomes difficult to know if a line cut to calculated length is really a quarter wave or a little bit either way. You may be going along quite OK until the Ham down the street starts getting better signal strength reports, then you become a "doubtful Thomas".

However, all is not lost, since this little "Match-Maker" will quickly enable you to adjust that doubtful line until it is a quarter wave, with an exactness that would please everyone except the blokes who have "Integral

Calculators" for breakfast each morning instead of good old porridge.

Most Amateurs possess an absorption wavemeter, if not they can construct one quite easily, for this is the basis of the unit.



Reference to the circuit diagram shows that two terminals are placed in the tuned circuit and that a sensitive detector is included in the form of one of the crystal detectors and an 0-1 Ma. meter.

Operation of the device is simplicity itself. The terminals are shorted with a link, the wavemeter is coupled to the transmitter, which should be operating into a dummy load. Coupling can be either direct or via a link.

The wavemeter is accurately tuned to the transmitter with coupling adjusted to give a suitable deflection on the meter.

Next the section of line is attached to the wavemeter terminals, the link removed and the tuning of the wavemeter checked. Any variation in tuning shows that the line is not a quarter wave. If the line has originally been cut a bit on the long side it can now be easily pruned to the correct length.

Finality is reached when the tuning of the wavemeter is exactly the same with either the link or the line connected to the wavemeter.

The line must always be open at the far end as the principle of operation is based on the fact that a quarter wave line which is open-circuited at one end reflects a short circuit at the other end. Therefore if the line is exactly a quarter wave, it can take the place of the shorting link in the wavemeter tuned circuit without upsetting the tuning in the slightest. If you work carefully you will find that even a quarter of an inch snipped off the line will make a difference. So now you can go to it and check your quarter wave line sections easily and cheaply.

\* 12 Montrose Place, Launceston, Tas.



## Six Days A Week But Not On Washdays

During the last few months VK5KL's rotary clothes line, on which has been mounted a 50 Mc. four element beam, has become quite famous.

He moved into a new house and had the gear installed in the spare room and was all set to go except for an antenna.

At first a "Halo," loaned from VK5QR, was used, but hearing others working DX he decided to do something about it. The result is shown in the accompanying photograph.



Although only a few feet high, amazing results have been obtained, working VK2, 3, 4, 5, 6, 7 and ZL with only six watts input to the small transmitter—an 1852 and QQCO4/15 combination harmonic oscillator and p.s.

What happens on wash days?

The 300 ohm line, where it feeds the "T" match, is tapped into the poly and dural rod. The bolts are unscrewed and the feed line folded out of the way until the washing is dry, then reconnected.

Yes the neighbors are amazed to see the beam whizzing around above the clothes.

The drilling of a hole, brazing of a nut to the bottom section of piping, and the use of a winged nut to lock the rotating section will suffice for some months until a shack and tower are erected.

### SUBSCRIPTIONS

• Please pay your Subscriptions PROMPTLY when due. Failure to do so may result in the loss of valuable issues of "Amateur Radio." High costs of production make it necessary to limit the number of extra copies printed each month.

### ADJUSTMENT OF V.H.F. CONVERTER R.F. STAGE

Where a 144 Mc. 8J6 push-pull r.f. amplifier is employed in a converter similar to that described by G2IQ in "Short Wave Magazine" of July, 1950 and August, 1949, the grid dip oscillator may be used as follows for checking the neutralisation as well as for the purpose of checking the resonant frequency of the grid and plate circuits.

On coupling the g.d.o. to the r.f. amplifier grid coil it will most likely be found that two dips occur when tuning the g.d.o. over the range containing the 144 Mc. band. One dip may be more pronounced than the other. The weaker one is due to the effect of the plate tuned circuit reacting back via the unneutralised grid-plate capacity of the valve. The neutralising condensers should be adjusted until only the resonance dip of the grid circuit remains. The grid coil may now be adjusted to frequency, checking in the normal manner with the g.d.o., and also the plate circuit brought on to frequency with the plate trimmer.

Final checking can be made with the converter switched on, receiving a station near the middle of the band and peaking the circuits for maximum reading on a signal strength indicator on the main receiver.—VK3ABA.

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CE	Chile	JT	Mongolian Republic (Outer)	SU (MD5)	Egypt	VS6	Sarawak
CM, CO	Cuba	K (W)	United States	SV	Greece	VS7	Hong Kongs
CN	French Morocco	KB6	Baker, Howland and Am. Phoenix Islands	SV5	Dodecanese Islands (Rhodes)	VS8	Ceylon
CP	Bolivia	KC6	Caroline Islands	TA	Turkey	VS9	Aden and Socotra Is.
CR4	Cape Verde Islands	KC6	Palau (Pelew) Is.	TF	Iceland	VS9 (MP4)	Oman
CR5	Guinea, Portuguese	KG4	Guantanamo	TG	Guatemala	VS9	Maldive Island
CR6	Angola	KG6	Marianas Islands (Guam)	TI	Cocos Islands	VT1	Kuwait
CR7	Mozambique	KG6	Bonin and Volcano Islands (Iwo Jima)	TT	Costa Rica	VU	India
CR8	Goa (Portuguese India)	KB6	Hawaiian Islands	UA1	Tannu Tuva	VU4	Laccadive Islands
CR9	Macau	KJ6	Johnston Island	UA1, 3, 4, 6, 7	European	VU5	Andaman and Nicobar Islands
CR10	Timor, Portuguese	KL7	Alaska	UA9, 0	Asiatic R.S.F.S.R.	VU7	Nepal
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DL	Philippine Islands	KW6	Samos, American	UG6	Armenia	YK	Syria
EA	Spain	KX8	Virgin Islands	UH8	Turkmen	YN	Nicaragua
EA6	Balearic Islands	KZ5	Wake Islands	UI8	Uzbek	YR	Roumania
EA8	Canary Islands	LA	Marshall Islands	UJ8	Tadzhik	YS	Salvador
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EL	Morocco Spanish	LX	Norway	UM9	Kirghiz	ZA	Venezuela
EL	Tangier Zone	LY	Argentina	UN1	Karelo-Finnish Republic	ZB1	Malta
EQ	Liberia	M	Luxembourg	UO5	Moldavia	ZB2	Gibraltar
EP, EQ	Iran	LU	Bulgaria	UP2	Lithuania	ZC1	Transjordan
ET	Ethiopia	LU	San Marino	UQ2	Latvia	ZC2	Cocos (Keeling) Is.
F	France	MB9 (OE)	Austria	UR2	Estonia	ZC3	Christmas Island
F	Algeria	MC1 (MD1, MD2, MT2)	Libya	VE	Canada	ZC4 (MD7)	Cyprus
FB8	Madagascar	MD1 (MC1, MD2, MT2)	Libya	VK	Australia	ZC8	Palestine, Arab
FB8	Kerguelen Islands	MD2 (MC1, MD1, MT2)	Libya	VK1	Heard Island	ZD1	Sierre Leone
FB8	New Amsterdam Is.	MD3 (MI6)	Eritrea	VK1	Macquarie Island	ZD2	Nigeria
FB8	Cormoro Island	MD4 (MS4)	Somaliand	VK9	New Guinea, Territory of	ZD3	Gambia
FC	Corsica	MD5 (SU)	Italy	VK9	Norfolk Island	ZD4	Gold Coast (British Togoland)
FD8	Togoland, French	MD6 (YI)	Egypt	VO	Papua Territory	ZD6	Nyasaland
FE8	Cameroon, French	MD7 (ZCA)	Cyprus	VO8	Newfoundland	ZD7	St. Helena
FF8	French West Africa	MF2 (AG2, IT)	Trieste	VQ2	Honduras, British	ZD8	Ascension Island
FG6	Guadeloupe	MI6 (MD3)	Eritree	VP2	Leeward Islands	ZE	Tristan da Cunha and Gough Islands
FH8	French Indo-China	MP4 (VS9)	Oman	VP3	Windward Islands	ZK1	Rhodesia, Southern
FK8	New Caledonia	MS4 (MD4)	Somaliand	VP4	Guiana, British	ZK2	Cook Island
FL8 (MD4)	Somaliand, French	MT2 (MC1, MD1, MD2)	Libya	VP8	Trinidad and Tobago	ZL	Niue
FM8	Martinique	OA	Peru	VP8	Cayman Islands	ZM	New Zealand
FN	French India	OE (MB9)	Austria	VP6	Jamaica	ZP	Samoa, Western
FO8	French Oceania (e.g. Tahiti)	OH	Finland	VP6	Turks and Caicos Is.	ZS	Paraguay
FO8	Clipperton Island	OK	Czechoslovakia	VP7	Barbados	ZS2	Union of South Africa
FP8	Miquelon and St. Pierre Islands	ON	Belgium	VP8	Bahama Islands	ZS2	Marion Island (Prince Edward Island)
FQ8, French Equator. Africa		OQ	Belgian Congo	VP8	Falkland Islands	ZS3	Southwest Africa
FR8	Reunion Island	OP	Greenland	VP8	South Georgia	ZS7	Swaziland
FT4 (3V8)	Tunisia	OS	Faeroes, The	VP8	South Orkney Islands	ZS8	Basutoland
FU8	New Hebrides, French	OZ	Denmark	VP8	South Sandwich Is.	ZS9	Bechuanaland
FY8	Guiana, French, and Inini	PA	Netherlands	VP8	South Shetland Is.	3A2	Menaco
G	England	PJ, Netherlands West Indies		VP8	Bermuda Islands	3V8 (FT4)	Tunisia
GC	Channel Islands	PK	Java	VQ1	Zanzibar	4X4	Israel
GD	Isle of Man	PK4	Sumatra	VQ2	Rhodesia, Northern	9S4	Saarland
GI	Ireland, Northern	PK5	Borneo, Netherlands	VQ3	Tanganyika Territory		
GM	Scotland	PK6	Celebes and Molucca Islands	VQ4	Kenya		
GW	Wales	PK7	New Guinea, Netherlands	VQ5	Uganda		
HA	Hungary			VQ6	Somaliand, British		
HB	Switzerland			VQ8	Chagos Islands		
HC	Ecuador			VQ8	Mauritius		
HC8	Galapagos			VQ9	Seychelles		
HE1	Liechtenstein			VR1	Gilbert, Ellice, and Ocean Islands		
HH	Haiti			VR2	Fiji Islands		
HI	Dominican Republic			VR3	Fanning Island (Christmas Island)		
HK	Colombia						
HL	Korea						
HP	Panama						
HR	Honduras						
HS	Siam						

## Countries With No Allotted Prefixes

Aldabra Islands
Antarctica
Bhutan
Easter Island
Guinea, Spanish
Inini
Jan Mayen Island
Principe and Sao Thome Is.
Tokelau (Union) Islands
Wrangel Islands
Yemen

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EQUIPMENT

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EQUIPMENT

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PT1368-8	200, 220, 230, 240	750, 1000, 1150, 1350, 1500	250 Ma.	£8/13/-
PT1371-8	200, 220, 230, 240	500, 600, 750, 850, 1000	300 Ma.	£7/0/10

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**1951 EDITION**

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# AMATEUR CALL SIGNS

ADDITIONS, ALTERATIONS AND DELETIONS  
FOR MONTH OF APRIL, 1951

**ADDITIONS**  
**New South Wales**  
2MZ—W. Cromie, 103 Oyster Bay Rd., Oyster Bay.

2AEP—R. G. Dunford, John St., Coonabarabran.  
2AIR—A. J. Smith, 19 Blenheim St., Enfield.  
2AIE—M. Stroehfeld, c/o E. M. Alcock, Fernside, Leigh Ave., Burwood Rd.  
2ANI—D. H. Lewis, Turle Point Rd., Dolans Bay.  
2ANY—J. M. Harrison, 1 Flat 17 Merlin St., North Sydney.

2AOQ—D. F. Lloyd, 99 Flat 17, Bondi Junction.  
2APE—N. R. Watkins, 7 Shilling St., Dubbo.  
2APY—M. C. W. Rish, 27 High St., Nth. Sydney.

**Victoria**  
3RF—R. F. Miller, Buln Buln.  
3ACX—D. H. Davis, 228 Station St., Box Hill.  
4AD—D. Clarke, 16 Mile End Rd., Carnegie.  
2AFD—S. K. Weaver, 3 Riverview Rd., Essendon.  
3AMI—M. Akram (Cpl.), R.A.A.F. Station, Bal-larat.  
3AQO—R. W. Gibb, "The Orchard," Rebin-a-warrah, via Wangaratta.  
3AXD—C. C. Burrows, Deschamps Av., Lilydale.

**Queensland**  
4FK—V. F. Kenny, On board vessel "Quest," private address: Allen St., Hamilton.  
4IIV—H. Vause, 50 Mitchell St., North Ward, Townsville.  
4LF—J. R. Lewis, Orchard St., Enoggera, Brisbane.  
4NQ—N. S. Piermont, c/o Station 4GL, Long-street.  
4OR—K. J. L. Langford, Nobby.  
4XL—J. T. Hope, Royal Parade, St. John's Wood, Ashgrove, Brisbane.

**South Australia**  
5CN—A. W. H. Wright, Signals Section, R.A.A.F. Station, Darwin, N.T.  
5DE—D. E. Sidler, Governor McDonald Hotel, Salisbury.  
5DP—R. E. Padman, 4 Bernard St., Lower Mitcham.  
5FO—H. E. Vivian, 63 Livingstone Av., Prospect.  
5GA—Adelaide University Radio Club, University of Adelaide, Adelaide.  
5VG—A. P. Gooding, 375 Henley Beach Rd., Lockleys, Adelaide.

**Western Australia**  
5HK—D. E. Graham, 110 Edinboro St., Mount Hawthorn.  
6UF—F. H. Turner, 74 Chelmsford Rd., Mt. Lawley.

**Territories**  
5FK—R. C. Fawkes, Konedobu, Port Moresby, T.N.G.

**ALTERATIONS**  
**New South Wales**  
2FH—Flat 6, "Warraway," Fairlight Cres., Manly.  
2ID—33 Rankin St., Balhurst.  
2JD—"Blue View," Elizabeth Cres., Newport.  
2RP—Lot 3, Pittwater Rd., North Ryde.  
2XD—28 Bellevue Ave., West Ryde.  
2AIV—Woolall Avenue, Kingsgrove.  
2AKK—47 Cecil Street, Ryde.  
2AND—78 Bridge Street, Lans Cove.

**Victoria**  
3CW—37 Bath Street, Chelsea.  
3GI—117 Bay Street, Melbourne.  
3GM—Paran Place, Glen Iris, S.E.  
3MH—112 Lyndard Street North, Ballarat.  
3PK—22 Altona, Arund.  
3TA—Nutmilk Road, Horsham.  
3TV—"Allandale House," Werrigall Rd., Holmes-bury, via Ashburton.  
3TY—31 Lowara Street, Warrnambool.  
3TZ—213 Bluff Road, Sandringham.  
3VX—10 Maude Street, Carnegie.  
3AN—23 Wiam Street, Glenroy.  
3AJZ—1 Henry Street, Box Hill.  
3AMC—43 Normanby Road, East Kew.  
3AMX—17 Dundas Street, St. Arnaud.  
3ANP—Green Street, Carisbrook.  
3ARN—R.A.A.F. Station, Ballarat.  
3ATA—"Portable," Nutmilk Rd., Horsham.

**Queensland**  
4AD—Radio Station 4GL, Longreach.  
4GM—M.V. "Melbidge," c/o Department of Native Affairs, Thursday Island.

**South Australia**  
5KW—Worman Street, Berri.  
5KV—13 Dunn Street, Semaphore.  
5SL—6 Marshall Street, Berri.  
5KX—233 Henley Beach Rd., Torrensview.

**Western Australia**  
5AR—c/o Department of Civil Aviation, Kal-barri.  
5FC—Broadcasting Station GNA, Narrogin.  
5GA—c/o Department of Civil Aviation, Forrest.  
5GI—"Karridale," Nutmilk Rd., Albany.  
5GW—5 Victoria Street, Albany.

**DELETIONS**  
**New South Wales**  
2LK—Cancelled.  
2LC—Cancelled.  
2LA—Cancelled.  
2NQ—Cancelled.  
2VR—Cancelled.  
2ABE—Cancelled.  
2ACB—Cancelled.  
2ACQ—Cancelled.  
2ADD—Cancelled. Now operating under 3ACK.  
2AFH—Cancelled.  
2AFU—Cancelled. Now operating under VKABE.  
2AGG—Cancelled.  
2AMY—Cancelled. Now operating under SDE.  
2ARU—Cancelled.  
2ARO—Cancelled.  
2ASA—Cancelled.  
2AVO—Cancelled. Now operating under VKSDJ.

**Victoria**  
3DL—Cancelled.  
3ER—Cancelled.  
3ET—Cancelled.  
3FK—Cancelled. Now operating under 9FK.  
3LI—Cancelled.  
3NF—Cancelled.  
3OL—Cancelled.  
3PV—Cancelled.  
3AKZ—Cancelled. Call Sign reserved two years from 1/4/51.  
3ALY—Cancelled. Now operating under 3RF.  
3AZN—Cancelled.

**Queensland**  
4ER—Cancelled.  
4FS—Cancelled.  
4MS—Cancelled.  
4OW—Cancelled. Now operating under 5CN.  
4TU—Cancelled.  
4UJ—Cancelled.  
4VD—Cancelled.  
4ZM—Cancelled. Now operating under 5ALE.

**South Australia**  
5CF—Cancelled.  
5JA—Cancelled.  
5JR—Cancelled.  
5KL—Cancelled.

**Western Australia**  
5BL—Cancelled.  
5AJ—Cancelled. Now operating under VK3AJB.  
5KH—Cancelled. Now operating under VK3WO.

**Tasmania**  
6TF—Cancelled. Now operating under VK3ABV.  
**Territories**  
1HV—Cancelled. Now operating under 4EV.  
1YL—Cancelled. Now operating under VK3YIG.  
8DL—Cancelled. Now operating under 2ANI.  
8JC—Cancelled.  
8NY—Cancelled. Now operating under 2AIFY.  
8VX—Cancelled. Now operating under 2AIFI.

**AMENDED ADDRESSES**  
In the April issue the address of VK3FL was incorrect. The full details are: VK3FL—John F. Isaac, 363 Bluff Road, Sandringham, Vic.

## ABSTRACTS FROM OVERSEAS MAGAZINES

"SHORT WAVE MAGAZINE," FEBRUARY, 1951  
Page 790: "Crystal Controlling V.H.F. Converter."—A two metre converter. Circuit 2 stages using a 12AT7 as r.f./mixer and another 12AT7 as i.f. amp. The crystal used is 7900 Kc. excited at 25 Kc. Input arranged for coupling to a balanced 300 ohm feeder. Full description, circuit and photographs.  
Page 793: "Heterodyne Keying Methods."—Good practical discussion on various circuits and values. Importance of obtaining complete cut-off; control grid bias; keying characteristics all covered with relevant circuit diagrams. Will be of considerable interest to the c.w. man.  
Page 814: "Calibration Checks on Two Metres."—Using the CC31 (Bendix) Wavemeter. Check points provided by two strong beats at 3600 and 3625 Kc., with a weaker note at 3650 Kc. corresponding to 144, 145 and 146 Mc. respectively make excellent markers for the two metre band. Full check point data given in table form. Well worth noting.

"CQ," FEBRUARY, 1951  
Page 17: "Radio Wave Propagation." Part 3.—Concluding a three-part article giving the authoritative low-down on why our high frequencies act as they do. Well written and illustrated. Offers suggestions as to how v.h.f. tropospheric "band openings" may be predicted.  
Page 24: "The Heterodyne."—A tuneable audio nulling amplifier for rejecting heterodynes. Circuit of a heterodyne eliminator operating in the audio frequency range which will be of value for phone work. Tubes used: 6X5, 6XGT and 6X3. External power supply required; 300 volts B plus and 6.3 heaters.  
Page 31: "Up And At 'Em."—Encouraging story of a simple vertical half-wave radiator.

"Whip" type of construction, thirty-three and one-half feet in length. Full data on methods of loading (coils) and tuning. Results obtained by author appear very satisfactory. Worth a trial. Used in conjunction with a counterpoise wire.

R.S.G.B. "BULLETIN," FEBRUARY, 1951  
Page 286: "A Switched Wide-Band Exciter," Part II.—Details the construction, practical modification of the wide-band coupler and the operating conditions to be selected. Well illustrated with photographs and diagrams. Output approximately 3 watts of r.f. on 3.5, 7, 14, 21 and 28 Mc. bands, the output voltage is stated to be constant to within 10 per cent without tuning adjustments.  
Page 291: "Combined Bias and Control Unit For Break-In Operation."—Circuit described has been extracted from the American AIA/ART 13 Control System and adapted to provide (1) p.d. bias, (3) relay keying of the b.a./i.d. stages of Tx and (3) operation of the relays which require to be "held" during transmission. Uses one 6CS (control valve) and one 6X5 (bias supply). Relays provide automatic change-over, including receiver muting for break-in operation.

(Continued on Page 9)

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CANTERBURY, E.7,  
VICTORIA

BY VK4QL

## DX C.C. LISTING

CW					
Call	No.	Ctr.	Call	No.	Ctr.
VK3BZ	15	100	VK3GM	19	113
VK3FH	15	100	VK6FJ	20	114
VK4EL	8	104	VK3XK	20	114
VK3RO	15	100	VK4DA	17	113
VK3CN	1	151	VK7LS	17	113
VK8SO	28	150	VK5BO	33	116
VK3GL	8	141	VK4HC	13	107
VK4LS	8	141	VK3YU	31	115
VK3VW	5	140	VK3FH	31	106
VK3KB	10	138	VK2VY	34	103
VK3YU	10	138	VK3AP	34	103
VK8RU	10	138	VK2NC	19	101
VK3RK	23	123	VK3CK	26	101
VK4BF	23	123	VK2ZL	33	101
VK3JE	31	134	VK7HR	36	102
VK3JK	3	122	VK7LJ	34	100
VK4DO	30	118	VK4KE	35	100
VK3L	30	118			

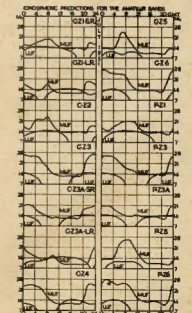
OPEN					
Call	No.	Ctr.	Call	No.	Ctr.
VK3BZ	4	303	VK7LZ	23	114
VK3JES	1	167	VK7LW	42	114
VK3JE	12	180	VK7LADT	14	112
VK6RU	8	170	VK7SV	48	112
VK6RG	1	167	VK4B	31	110
VK3JCK	1	167	VK7CB	21	110
VK8W	1	167	VK4WF	40	109
VK1DI	3	160	VK6Z	35	108
VK4EL	12	160	VK7WZ	37	108
VK4DS	24	140	VK3AWN	38	105
VK6KO	15	147	VK7VN	18	104
VK3ST	2	135	VK7L	37	104
VK3MC	8	130	VK6PJ	44	104
VK6OP	18	127	VK7HE	17	103
VK6OD	29	125	VK7BO	30	103
VK6JN	29	125	VK7KT	31	103
VK3FL	32	120	VK6HO	33	103
VK4DE	38	123	VK7DX	42	103
VK3JH	30	120	VK6K	35	102
VK3JHM	30	120	VK7DY	35	102
VK3NS	16	123	VK3AC	8	100
VK3JH	16	123	VK7ST	39	100
VK3HT	41	117	VK6WW	45	100

● The thought for the month is prompted by my own and others observations. Lately, of the number of VKs who don't know or don't care that there is a "Gentlemen's Agreement" in operation in VK to keep 7300-7050, 14000-14100, 28000-28100 Kc. clear of all telephony transmissions. Cheers until next month.

## JULY, 1951

The Perth charts are similar to those based on Canberra. No forecasts are given from Perth to Zones Z3 and Z4 for the current month, as chart P-Z3 would be essentially similar to chart P-Z1, while chart P-Z4 might be unreliable due to auroral activity in high northern latitudes.

The Prediction Service welcomes comment on the accuracy of its predictions. These should be forwarded through the W.I.A.





# Remembrance Day Contest, 1951

The Remembrance Day Contest is an Australian annual contest to perpetuate the memory of those Australian Amateurs who gave their lives for their country during World War II. It is held on the week-end nearest to the 28th August in each year, the date on which hostilities ceased in the S.W.P.A.

A handsome Perpetual Trophy is awarded annually for competition between States, inscribed with the names of those who made the supreme sacrifice, and so perpetuating their memory throughout Amateur Radio in Australia. The name of the winning State each year is also inscribed on the Trophy.

## RULES

1. The Contest will commence at 1800 hours E.A.S.T. on 11th August and continue through until 1700 hours on the 12th August. The period of operation of any station is limited to any twelve consecutive hours within the 24 hours set down.

2. The Contest is open to all Australian Amateurs, but only members of the W.I.A. are eligible for the awards.

3. The Contest is an open event—c.w., phone, or a combination of both may be used.

4. The Contest is an Interstate Contest, and Amateurs in each State will endeavour to contact Amateurs in all other States.

5. A station may be operated by more than one operator provided that a separate log is entered for each operator under his own call sign.

6. All existing Amateur Bands may be used, and all transmissions must conform with the Regulations as laid down in the P.M.G. "Handbook For The Guidance Of Operators Of Amateur Wireless Stations." Any breaches of these will lead to the disqualification of the operator concerned.

7. The arrangements of schedules for contacts on other bands will not be permitted.

8. All stations entering the Contest will call "CQ RD" if using c.w., and "CQ Remembrance Day" if using phone.

9. A State competing for the Trophy must submit a minimum of six (6) logs from financial members before becoming eligible for contesting the Trophy.

10. Only one contact per station per band is permitted.

11. Serial numbers to be exchanged during the Contest will be as follows—

(a) For c.w. the first three figures will be the RST (telegraphy) report, followed by the serial number of the contact commencing with any number between 001 and 100 for the first contact and increasing in value by one (1) for each successive contact. If any contestant reaches 999 he will then commence 001 and continue 002, 003, 004, etc.

(b) For phone the first two figures will be the RS (telephony) report, followed by the serial number of the contact commencing with any number between 001 and 100 for the first contact and increasing in value by one (1) for each successive contact. If any contestant reaches 999, he will then commence 001 and continue 002, 003, 004, etc.

A complete exchange of serial numbers must take place before any points may be claimed for the contact.

## SCORING

12. In order that an equitable distribution of points for States with a large number of contestants compared to a State with fewer contestants may be determined, a sliding scale of points has been allotted as shown in the scoring table appended.

13. In addition to the points in the scoring table may be added to a contestant, a bonus of 25 points may be added to the total score for each State worked on 50 Mc. or above.

## LOGS

14. The log submitted must be in the following order—Date, time, band, emission, receiving signal's call sign and RST/No., my RST/No., time of QSO, points claimed. No log will be accepted unless laid out in this order!

15. A statement signed by the operator must be attached at the conclusion of the log stating that the Regulations (Rule 8) and these rules have been observed. Any logs departing from this form will automatically be disqualified.

16. All logs must be forwarded through the Contestant's Divisional Council (for membership checking) to reach the Federal Contest Committee, Box 1734, G.P.O., Sydney, on or before 4th September, 1951.

## AWARDS

17. Attractive certificates will be awarded to the first, second and third highest in each State.

there will be no outright winner for Australia. Where a large number of logs are received, from any one State further certificates may be awarded at the discretion of the Contest Committee.

## TROPHY

18. The State to which the Perpetual Trophy will be awarded shall be determined as follows: To the average of the top six (6) logs shall be added a bonus arrived at by multiplying this average by the ratio of valid logs submitted by that State to the total of Amateur Licences in the Division at the time of the Contest.

Example. Total points equals—  
Average Score  $\left( \frac{\text{Number of Logs}}{1 \text{ plus Number of Licenses}} \right)$  in Division

19. The logs which will be accepted for the multiplier under Rule 18 shall show at least five (5) contacts in the Contest.

20. The Trophy shall be forwarded to the winning State in its container and will be held by that State for a period of twelve (12) months when the winner for the succeeding year is determined.

21. The Federal Contest Committee shall be the sole adjudicators, and their ruling will be binding in the case of any dispute.

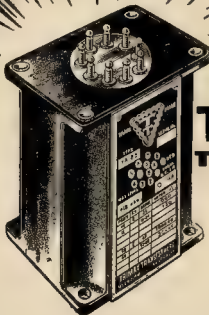
## SCORING TABLE

	To						
	VK2	VK3	VK4	VK5	VK6	VK7	VK9 Total
VK2	1	2	3	4	5	6	21
VK3	1	2	3	4	5	6	21
VK4	1	2	3	4	5	6	21
VK5	1	2	3	4	5	6	21
VK6	1	2	3	4	5	6	21
VK7	1	2	3	4	5	6	21
VK9	1	2	3	4	5	6	21

NOTE—Read the table from left to right for points for the various States.

Examples—

A VK2 scores 1 point for a VK3 contact.	2	"	"	"	"	"	"
A VK3 scores 2	3	"	"	"	"	"	"
A VK4 scores 3	4	"	"	"	"	"	"
A VK5 scores 4	5	"	"	"	"	"	"
A VK6 scores 5	6	"	"	"	"	"	"
A VK7 scores 6	6	"	"	"	"	"	"



## TRIMAX TRANSFORMERS

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	John Martin Pty. Ltd.		Radio Elec. Wholesalers Ltd.	Atkins (W.A.) Ltd.
				Carrie & Co. Ltd.



# FEDERAL, CSL, and DIVISIONAL NOTES

Federal President: G. GLOVER (VK3AG); Federal Secretary: G. M. HULL (VK4ZS); Box 2611W, G.P.O., Melbourne.

## NEW SOUTH WALES

President: J. Corbin, VK3YC.  
Secretary: David H. Duff (VK3EO), Box 1736 G.P.O., Sydney.  
Meeting Night: Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.  
Divisional Sub-Editor: Don B. Knock, VK3NO, 43 Yankoo Ave., Waverley, Sydney.  
Zone Correspondents: North Coast and Tablelands: J. M. Hestelick, VK3KO, Raleigh, Newland, 2000 hours EST. 50 and 144 Mc. Frequency checks available from VK3WI. Intra-State working frequency, 7175 Kc.  
H. Hawkins, VK3YV, 27 Comfort Ave., Cessnock, Western W. H. Hill, VK3WH, Cumberland, Forster, South Coast and Eastern: R. H. Rayner, VK3DO, 42 Pettit St., Vau; Western Suburbs: A. C. Pearce, VK3AB, 121A Bulfinch Rd., Leichhardt, Eastern Suburbs: D. B. Knock, VK3NO, 43 Yankoo Ave., Waverley, North Sydney: L. D. Cuffe, VK3AM, 778 Millway Rd., Manly; H. George, VK3A, Ackerman, VK3ALG, 32 Park Rd., Carlton; South Sydney: V. H. Wilson, VK3VW, Cr. Wilson St. and Marine Pde., Maroubra.

## VICTORIA

President: G. S. C. Semmens, VK3GS.  
Secretary: C. Dyer (VK3DY), 19 Collingwood Ave., Brighton, V.A. 6254.  
Administrative Secretary: Mrs. S. May, Law Court Chambers, 191 Queen St., Melbourne.  
Meeting Night: First Wednesday of each month at the Radio School, Melb. Technical College.  
Zone Correspondents: Western: C. C. Waring, VK3YV, 12 Stone St., Stawell, South Western: K. C. Bore, VK3W, 1000 Warrnambool; Western: T. K. Tennant, c/o Victoria Theatre, Tullara; Far North West: M. Folie, VK3AZ, 211 Mill Rd., Mildura; Eastern: H. O. Kellas, VK3AHK, Thambra; North Western: C. Case, VK3ACE, Cumminson Ave., Birchlea.

## WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK3WI Sundays, 1100 hours EST, 7100 Kc. and 2000 hours EST 50 and 144 Mc. Frequency checks available from VK3WI. Intra-State working frequency, 7175 Kc.

VK3WI: Sundays, 1130 hours EST, simultaneously on 3500 and 7100 Kc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency 7185 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK3WI: Sundays, 0900 hours EST, simultaneously on 3750 Kc., 7100 Kc., 14345 Kc., 32.4 Mc. and 144.128 Mc. Frequency checks are given two nights weekly, and the times are announced during Sunday broadcasts. 7005 Kc. channel is used from 1000 to 1500 hours each Sunday as VK4 query service to VK4WI.

VK3WI: Sundays, 1000 hours EAST, on 7100 Kc. Frequency checks are given by VK3DW by arrangements only on the 7 and 14 Mc. bands.

VK3WI: Sundays, 0830 hours WEST, on 7100 Kc. No frequency checks available.

VK3WI: Sundays, at 1000 hours EST, on 7100 Kc. No frequency checks are available.

## QUEENSLAND

President: J. H. Farrell, VK4WJ.  
Secretary: J. F. Pickles, VK4FP, Box 888J, G.P.O., Brisbane.  
Meeting Night: Third Friday in each month at the I.R.E. Rooms, Wickham St., Valley.  
Divisional Sub-Editor: Clive J. Cooke, VK4CC, Kurara Street, Chermside, Brisbane.

## SOUTH AUSTRALIA

President: E. A. Barbier, VK3MD.  
Secretary: G. M. Bowen, VK3XU, Box 184K, G.P.O., Adelaide.  
Meeting Night: Second Tuesday of each month at 17 Weymouth St., Adelaide.  
Divisional Sub-Editor: W. W. Farnum, VK3PS, 10 Victoria Avenue, Rose Park.

## WESTERN AUSTRALIA

President: J. Campbell-Watson, VK4WJ.  
Secretary: E. B. Lang, Box N105J, G.P.O., Perth, W.A.  
Meeting Place: Padbury House, Cr. St. George's Ter. and King St., Perth.  
Meeting Night: Third Tuesday of each month.  
Divisional Sub-Editor: Alec A. Smith, VK3AS, 75 Weston St., Carlisle, Western Australia.

## TASMANIA

President: J. Brown, VK3TB.  
Secretary: R. D. O'May, VK3OM, Box 37B G.P.O., Hobart.  
Meeting Night: First Wednesday of each month at the Photographic Society's Rooms, 163 Liverpool St., Hobart.  
Divisional Sub-Editor: R. Exell, VK7BJ, 77 Mells St., Hobart, Tasmania.  
North Zone Correspondent: C. A. Cullinan, VK7KW, 13 Montrose Place, Launceston.

## FEDERAL WHISPER!

Whispers are funny things: they are a form of communication that move around very silently and are reflected off more ears than our radio waves are reflected off layers of ionized atmosphere. Sometimes they may reach any specific point—other times they reach a point where they can utilize themselves to good advantage to the detriment of the truth. In the course of traversing their divergent paths become somewhat distorted.

This may all sound most peculiar, but it's a fact nevertheless, the point being that Federal Executive has received one or two of these divergent whispers. Having been received, raised and debated, the audio component has been reproduced. And do you know what it said?

It said broadly, that the members of Federal Executive were an odd bunch of people—refused from some ethereal world of their own not known to earthly people. Have you ever heard the like?

But it made us ponder just the same. Perhaps we have been too engrossed in the affairs of the Institute to notice that we were gradually becoming shrouded in the mists of officialdom! Or perhaps it was a warning that, being Federal Executive, we should not speak with the earthly people. We have even been thought of as anybody But Amateurs! What a funny world.

Gentlemen, let us state right here and now, that far from being mortals from some far removed world, we are commoners of good old Australia flesh and blood at least we claim so since we were mostly born and bred here. And as to hawking to and about us—we are even active Amateurs like yourselves, bitten with the same bug, coming up against the same technical problems, having the same fun and experience getting rid of them. Yes sir! We're normal earthly beings alright.

Admittedly we don't advertise ourselves over the air, so you can say we are secretive to that extent. But should we have to? Our names and call signs have been printed in the magazine scores of times, they're even in the call sign book with the correct address, believe it or not! Can you imagine how many times you must have read about us—or do you bother to read about us and our doings? Do you know that most of us can even find time to attend our Divisional meetings?

—Just to sort of take an interest in what's going on down there?

But say, we hear all sorts of rumours that some of you Interstate boys periodically visit our picturesque metropolis! It's a lovely city you know—broad multi-element slatted arrays, great steel towers gracing the skyline even into the country areas, long sleek shaped wings, and a few tall chimneys. We might appear foals to the multitude, but we can still appreciate a pretty picture.

Joking aside though, why not make our acquaintance some time boy? Surely you can't say that the blame is all on our side! If you do, then we must hasten to assure you that our shack doors—and our front doors—open any time to newcomers and old-timers alike. You won't find us half the ethereal recluses that the whisper waves have distorted us into—in fact you'll find us just plain everyday Australian type of people ready to receive you with a firm handshake and the true Amateur-like hospitality. If you don't believe us look us up some time—

George Glover, VK3AG, 54 Watt Street, Box 5111 (WX 3440).

Max Hull, VK4ZS, 22 Dryden Street, Canterbury (WP 7097).

George Manning, VK3XJ, 56 Type Street, Richmond (JA 3204).

Bill Grosow, VK3WG, 2 Anthony Street, Glen Iris (B 885).

Gordon Weyland, VK3XU, c/o. Castlemaine Woollen Mills, Castlemaine.

Perc Evans, VK3OZ, 3 Howitt Street, Glen Iris (WA 4282).

Oh! And before we forget, we talk your language too! Yep! Whispers sure are funny things, but you can phase them out if you try.

## THOSE CERTIFICATES

Due to a preponderance of administration to attend to these last few months, it has been a difficult task to check the 1961 National Field Day logs. However, these are all but completed

## W.I.A. ACTIVITIES CALENDAR

July 5: H.S.E.B. Two Metre Field Day Contest.  
August 15: Remembrance Day Contest.  
October 15-18: VK-ZL Jubilee Contest (C.W. Section).  
October 28-29: VK-ZL Jubilee Contest (Phone Section).

and will be published in the August issue of "Amateur Radio."

It is also hoped that patience be the virtue of those who wait successful in gaining places in the VHF Ross A. Hull Memorial Contest and are awaiting the issuance of certificates. Since groupings as to this Contest, Federal Executive desires that the certificate be of a higher standard. There being no certificate in existence at the time of the Contest, the plan has already been implemented to improve to commence a programme of "certificate improvement." Unfortunately, the times dictate a slow delivery on anything in the sphere of printing and hence the request for patience. It is thought that the reward will be worth waiting for.

Federal Executive are holding a sizeable stock of certificates awarded for various achievements, but plans have already been implemented to gradually replace these with a certificate of higher standard as the stocks become exhausted.

## GOVERNMENT GRANT OF £350 FOR 1961 VK-ZL CONTEST

Confirmation has been received with relation to a Government grant of £350 to be spent on the 1961 VK-ZL Jubilee Contest to celebrate Jubilee year. The rules of the Contest will be published in the August issue of the magazine under the heading of the 1961 VK-ZL Jubilee International DX Contest. Complete details of the Contest, together with the prizes, advertising and other awards, are at present being worked out by the Federal Contest Committee who have been co-opted from the New South Wales Division for the following year under the terms of the Contest Committee.

The boys in New South Wales are really moving on this Contest and we can assure you that it will be well worth entering for this year. The success of this year's Contest is important for two reasons, firstly, and most important, the advantage of having Government support for the Contest to celebrate the Jubilee, and secondly, this is the first time under existing administration that Federal Executive have been asked to contribute to the Headquarters' Division. So give them all the support they rightly deserve fellows and do your "bit" to make this year's Contest an outstanding success.

The W.I.A. are proud of the fact that this grant has been made available to them and should like to thank the New South Wales Divisional Council who were responsible for obtaining it.

# ZLs ON 40 METRE PHONE

Although neither the Postmaster-General's Department nor Federal Executive have been officially notified of the fact at the time of going to press that the ZLs are now licensed to operate phone on the 40 metre band, it is fairly evident, from reports heard on the air, that they have been granted this privilege within the gentlemen's agreement band from and including 7050 to 7200 kc. This should prove a major event in encouraging greater population of this band.

## REMEMBRANCE DAY CONTEST

The Remembrance Day Contest commences on 11th August and it is hoped to have a big and better participation this year. The Convention agreed to a change in scoring procedure with a view to encouraging the larger States to F.E. men ask you all to "be in it" and make it another outstanding success for the year. Remember the thought behind it—*Let Us Forget.*

## NEW COUNTRY

854 Starland is now recognised as a separate country and can be added to your DX list.

## PEARL NEWS

The news bulletin of the Pac East Amateur Radio League has been received by Federal Executive together with the details and samples of two certificates available for DX proficiency. For VK stations to earn the awards, seven out of a possible nine JA districts are necessary for the W.A.J.A.D. (Worked All Japanese Amateur Districts) award, and any five JA stations are necessary for the W.F.J.S. (Worked Five Japan Stations) award. Any members desiring to claim these awards must forward the necessary cards to the QSL Manager, JAHB W H Cunliffe, QSL Bureau, F.E.A.R.L., A.P.O. 500, San Francisco, California.

## SILENT KEY

It is with deep regret that we record the passing of:—

VK2UF—Frank Tarrant, of Cooks Hill, Newcastle, N.S.W.

VK3UR—Via. Smith, 350 Wellington Street, Collingwood, Vic.

# ACCURATE FREQUENCY TRANSMISSION RESULTS

The following is the official results of the Accurate Frequency Transmission from VK3WI on 24th May on the 3.5 Mc. band.

Frequency Kilocycles	Error — 80 Cycles
3530	— 40 "
3560	— 10 "
3590	— 35 "
3620	— 30 "
3650	— 10 "
3680	— 20 "
3710	— 60 "
3740	— 10 "
3770	— 80 "
3800	— 20 "

# NEW SOUTH WALES

## EAST SYDNEY AND SOUTHERN SUBURBS

Walking along the road I blew into that grizzled old timer, Malcolm Perry, of early day Waverley Club fame—one of the pioneers. Mal is no longer active in the world of Amateur Radio, but takes a keen interest nevertheless in what the young fellas are doing.

Members of Waverley Club, 2BV, have been heard making cross-band tests with 2ASZ on 2 metres, not apparently, with much success.

Andy 2AX had an unusual accident, doing a job in his daily toil. Andy nearly dropped a Hollister's Rx and in saving that from damage, cut his head rather badly. 2ABD figured recently in the reception of distress signals from a disabled 300 ton motor vessel off the North Eastern Coast. He is using a presently-popular system of n.b.f.m. and many of the gang are sitting up and taking notice of it. A new station in the Bondi area is Joe Howie, active on 40 and 20 phone with the call sign 2AYH.

Transmission was tested one night at ENO's location when Cor Cramon, of w.b.f. fame brought along his splendidly engineered 500 Mc outfit. Although the only station worked was 2WJ, four miles distant, signals were 50 plus 2NO would like to end the time to get going

on the band and is hoping Ivan 2TN is heard at intervals on 40 phone with a good transmission, but you need to keep back from that mike a bit OM, otherwise the granules seem to "eat" a bit. 2ASE is very proud of his "rogue gallery," a collection of photos and cards of Amateurs who have visited him.

All 2CE is braving the b.c.'s on 40 phone, but the many other on 40 metre only uses the band "in between serials." He has a natty little 144 Mc Tx Rx in his car, using a 6C4-12AF combination powered from the vibrator supply which delivers h.t. for the car's broadcast Rx. Wal 2SA told his harmonic that a pile of old magazines could be got rid of. Which would have been OK excepting that QST back to 1926 went into the bonfire, sheer sacrilege says this scribbler. A trio of OT's heard in Sunday morning contact on 40 were VKC 2SA, 2RI and 2NO; comparing notes on "them was the days." Visitors to the scribbler's station have been Bob 2ST and Chas 2CH.

2NO is using successfully on 40 and 80 a phase modulation scheme described originally in "QST" for January, 1941, and in 1948 in the American "Radio and Television News" by WE8BT. It really works well as 2ABD demonstrated firstly, and minimised h.c.i. very considerably. In company with 2CM, 2NO has been holidaying in the north west of the State with Ray 2HC. Heard on 20 metre phone was Bill 2BC, that's an ardent brass pounder. Yes, it's true, but not from his own station; he was giving a helping hand to newcomer 2AYH, Joe Howie.

Tony 2IH heard with excellent transmission, believe he has taken on a new hobby—sailing boats. Phil 2FR puts out a nice signal on 40 phone. 2AQA has just about got settled down in his new QTH at Sylvania and will operate his rig in the garage by remote control. He is a real Ham, for that is his name—Tom Ham.

Pleased with his 40 metre soldier's dille midget, Ray 2AUG has nearly completed another midget for 20 metres. The 813 and the tank coil on the top of the dille certainly looks very business-like. Ron 2YH will be moving into a new QTH very soon. Ted 2AHQ had a look at his rig the other day and threatened he would be on the air again very soon. On the evening of 26th May, a miniature hamfest was held at 2AX's, and those present were 2AX, 2ARR, 2RF, 2CE, 2CF, 2MB, 2ALB, 2ASE, 2WF and 2NO. The "sport" prepared to show by Andy's 2YV, XYL, was something to be remembered and highlights of the evening were provided by the indefatigable friend 2AH, who, with his never-to-be-forgotten wire recorder

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sent his Ham gear to Melbourne which will be his new QTH.

3YA operating new p.p. 827s rig on 40; also heard on 80. 3GR QSOed PKAAC on 40 phone. 3RU and 3GR away on a holiday tour and visited Home to. Bicut, Burtwick, Symon Hill, Shepparton, Benalla and Wangaratta. SCE at Berriville has a 80 foot lattice mast and Roy is keen to get the cobwebs out of the rig and get back into the battle again. 3BI heard having lots of fun on 80 metres. 3DS and 3ABI not at present, too QRL with business. 3HW not on lately.

3MH is in his new home and is pushing out quite a nice signal on 40 and 20; new QTH is close to 3RW, so plenty QRM 1 guess. 3BU 3AMH, our Secretary, away in VKI on holidays. Conditions on 40 and 20 very patchy. Some DX available to the very patient ones. A good QSO is available to anyone contacting a Dutch boat, the operator using a special permit call of P0ABG on 20; Jan uses 35 watts and is putting in quite a good signal to VK. This one hands out a welcome to Cedric 3QG who is now a resident of Ballarat; rig is a Type 3. Another new call sign in Ballarat is 3EL, has not been heard as yet, what about it OM. 3ASV and 3ALM seen replacing huge divots out Buninyon way on a recent morning. 3BE not heard very often, YL trouble we think. 3SE on occasionally using phone and c.w. 3CH met in Ballarat recently, was seen peering into a cafe window looking very hungry and was soon put on the right tram by 3GR. Thanks to all who made the trip to Ballarat and made the B.W. Zone Convention such a success.

3BU has been on 2 metres. Melbourne boys coming in rather well on 2 on his Rx. Bill has re-built his wire recorder and playing some of the boys' transmissions back to them. 3WT still gets on when he is not on his motor bike. The Geelong gang at last managed to get in the May S.W. Zone hook-up, hi. 3ABK has a transceiver going on 2, has a 3 element beam for that band. 3ABE also has a beam and 622 for 144 Mc. 3AKE has a new Rx for 144. 3ALG not so active during May, 3IC gets on for the Geelong hook-up of a Thursday night. 3AJF getting on a bit more often now the yacht is finished. 3AOL has a new final going. 3CM, 3ABE, 3ACN, 3APG, 3BY and 3ZW have been silent for some time.

#### CENTRAL WESTERN ZONE

A new call in these notes is 3AIXM of Newcastle, Bob at present is running about 15 watts

input to a single 807, but has plans in hand to go QRO to 80 watts with a pair of 807s. When it is complete it should be a very nice example of the standard type of Amateur Tx. 3DP is also going QRO, is anxious as to the effect of the 1,000 volt motor-generator on the 807s. More work has been put into his new Rx finishing up with 50 Mc. I.f.s. Jim is having some trouble with the 144 Mc. "Lead" plenty of juice goes in, but nothing goes out.

During the last zone hook-up 3AKW mentioned a secret Tx, it turned out to be a 144 Mc. oscillator using linear tank circuits, at present it is operating on 140 Mc. and only requires an antenna to get into business. 3TA has his 200 converter going on 144 Mc. but how much DX (if any) Byron has heard to date we don't know. 3SC when last heard was busy experimenting with a Franklin oscillator 3YV has completely revamped the n.b.f.m. Tx into an antenna tuning unit case. With a Rx in the bottom of the case, a portable outfit is available—the Tx is bandswitched.

3EF paid his annual visit to Stawell with the local leather-bashers; Bert QRL with work. When the new house is finished, Bert should have more time.

The zone convention to be held at Ararat on Sunday, 10th September, promises to live up to its usual high standard (no kidding) and for the main event—the Tx Hunt on 3.5 Mc.—a worth while prize is available, so polish up your d.i. ideas cheap, and make a good contest of it. I would sure hate to see the prize go to the experts of the other zones, but that is up to you entirely. We would suggest you look at the d.i. Rx and decide if you could carry it or if it would have to stay in the car; the difference may have quite a bearing on the result. Transmission quite likely will be on c.w., as voice operation could easily give the position away. For those interested in v.h.f. and who could arrange skeds, the hills surrounding Ararat offer good DX possibilities. Further details will be finalised over the zone hook-up, on 8th July at 10 a.m. on 7155 Kc. (approx.). See you then.

#### EASTERN ZONE

As I have missed out on a couple of zone nets this month, anyone isn't getting his name in these notes. Anyway, if I asked every Ham in the zone what he had been doing, the answer would be "nothing"! 3ALA had his second win in the portable contest, with 3RH and 3QZ

filling the other places, nice work! 3ADA has been posted to VKR, and is with a R.A.A.F. survey unit in the centre. 3PR is to move to a new house soon, I heard him say so one day on 40. 3AKF was in Sale for some weeks on relief duty at a financial institution. 3QZ checking up on power quotas!

3SS has his new shop open and his Junior op. David has left school and is twinging a coldiron iron for Pop. Kath recently said a very hurried visit to SPR and being a Sunday, he was looking forward to a slice of the famous cream sponge. He was out of luck! Mrs. IPR had manufactured the salubrious article and set it aside for the cream, etc., to set. Ron's dog, a very intelligent animal and obviously accustomed to the better things of life, sneaked in and scoffed the lot.

3VL/3BS not heard lately, said to be changing houses and working portable on 8. 3BB, another missing friend, still hasn't fixed the feeders. The May meeting of the Sale Sub-Branch was very interesting—32J's lecture on Radar and the C.R.O. being one of the best yet. They were a well behaved lot, and didn't pinch anything from me either! Apologies to the chaps I haven't mentioned and see you anon!

#### GEELONG AMATEUR RADIO CLUB

At the first meeting of the month Brian 3AOL gave a very interesting lecture on transformer winding, including power transformers and modulation transformers. From time to time he was asked questions which he readily answered.

Over 200 attended the Exhibition (24th May) which was rather encouraging. Three test tables were laid out the length of the hall on which over 30 pieces of equipment were displayed. Outstanding exhibits were a complete station of good workmanship by 3AUF.

3ABK had his motor bike fitted up with portable Tx and Rx including d.i. loop to show how he goes out on a field day. He also had a transceiver for 2 metres. 3BU had his wire recorder with which he had spent hours in building, with rather pleasing results and those that had had his d.i. voice put on the wire and played back to them. 3ABE had a 2 metre Tx and Rx and a 3 element close-spaced beam. 3AKE and 3BW had v.h.f. gear.

A display of noise locating equipment was given by a representative of the S.E.C. Other equipment included crystal sets and many pieces of disposal equipment which had been converted for Amateur use. XYLs and YLs were busy and helped with the supper, 80 persons

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washing machine in pieces, and several other things in the process of being painted duck egg blue with a white trim color. I have certain articles (it's alright Laurie, you can trust me not to give away your secret: oyster Parson's call) and a few more. The washing machine is seen tearing down the streets of Berri at about sixty miles an hour giving honk honk. You can hear it tearing down. I think somebody has made a slight technical error.

K. Duff (31Q) passed through Adelaide enroute for Darwin this month, and as a mobile he had quite a few contacts with the local boys. Believe that he was parked at a local carpark for a few days, but did not get the chance to meet him.

Wyck BWM is back from a vacation at Melbourne and brings news of several of the boys. Glad to know that Charlie 3BS is still in the pink, and hope that the XLV is on the road to recovery. OM, Jack 3WR seemed to figure a bit in Wyck's tales, and incidentally, Wyck is back in the control room and the milkman and baker calling seems to have impressed him more than the others. I have found him curled up behind the power cabinet several times lately to please don't tell him any of the inner workings again OM as he takes it too literally. Believe me, I don't know. I kicked him back to consciousness he dreamily said, "two pints please, and make it a square loaf." Heed that, Wyck 3BS and a VJ station (both call) a French station the other day. The French station came back to both, gave them each a fair run and then crossed the VJ station and the VKS standing by. The VKS called in several of his mates to work the VJ station, and the VKS did not object. The VKS was standing by. A splendid time was had by all, with the VKS still standing by. They all lived happily ever after, and as far as I know the VKS is still standing by. Wouldn't it!

## WESTERN AUSTRALIA

Firstly I must apologise for the absence of the notes in the last issue of "A.R." It happened that I had to leave the country, so I happened and although I made arrangements for the notes to be submitted, those arrangements must have fallen through. I am sorry. I was at the Padbury House on the 18th, with 6JW in the chair and another good roll-up of members. The meeting was very successful, and the holidays from the magnetic observatory at Watheroo. A new member in 6UF was elected and 6JW was elected to the position of 6JW. 6JW and 6JW were elected to the Contest Committee, but another nomination is required. It is hoped that a three member committee will be set up for this committee. A good deal of discussion took place on the proposed unified constitution and our own Divisional one, but as this has not been decided, it is not possible to members and over 6W1, it need not be repeated here.

Two very excellent lectures were delivered, namely, "The Crystal Calibrator and Super-Selective Receiver," by 6SA, and "Rotary Beams—Their Design and Adjustment," by 6MK. I think that both Jim and Tom could be considered authorities on their respective subjects, and both lectures were received with considerable interest. The notes of both of these lectures have been distributed to every member, and I understand these notes are being very well received, especially by country members.

A parcel of surplus radio gear from a city store was balloted for and I think every member present at the time was anxious to get it to cart off home, even if it was only a short pile. The meeting broke up about 11 p.m.

## PERSONALITIES

6BO has been heard on ten metres lately, but hasn't described it by any means. Rollo is looking forward to the possibility of periodic E openings around the shortest day of the year. Recently returned from the north west are 6RW and 6RW. 6RW is enjoying a very good time installing radio gear, fishing and sunbathing. 6RW and 6RO have recently joined the ranks of the "brilliant" boys, and 6RW is now successfully finding less time for radio. 6RP still working DX on 80 (when conditions permit).

6LG down in Albany continues to pour a stream of letters to Perth and to come back from Forrest for just over a week. Bill managed to get round to some of the shackles in the short time at his disposal. See 6RW in August OM. A new member in 6BR is preparing for 40 metre c.w. activity with a Command TX. 6JW heard on 40 with a QRP sig (six watts). Congratulations to 6DW for being placed on the State in the Ross Hull Memorial V.H.F. Contest; nice work Don. 6WM, of Kalgoorlie, is doing quite well on 10 with a nice signal. I did get around to seeing you whilst up there recently Bill. 6DK getting ready to give 10 a thrashing, and is thinking of dabbling in a.b.f.m. Also has the material for a new three

element beam on 20, so it looks like a busy time ahead of 6RH.

With the coming of "A.R." yours truly comes to be the Sub-Editor for VKS. However, before closing down, I would like to thank 6WZ, 6WZ and 6GJ for supplying excellent items for the column. Also 6WZ and 6JW for broadcasting the 6WZ news bulletin for me on the 10 metre band. Very much appreciated. Thanks folks for putting up with me for so long. Cheerio.

## TASMANIA

Our June meeting was surprisingly well attended, possibly due to the fact that a quantity of very cheap radio gear was available and was welcome by all those present. The lecture was given by TOM on "Bandwidth" (the "finding" as some members thought of copies of "Amateur Radio" into book form. Sounds easy the way Bob described the necessities required, so in future there should be no reason why members cannot have easy access to articles published in "A.R.")

Heard working cross band one recent Sunday was TLE and TOM. Len was on 40 with an f.h. signal, and 6WZ was on 144 Mc. Future broadcasts will include 3.5 and the 7 Mc. transmission on 40, and also 144 Mc. transmission on 10 of Northern members. TEJ and TSA active at Opossum Bay. Believe Charlie is having trouble with several orchards being in the way of his DX long wire antenna.

Congratulations must be extended to TAJ for his work with a home constructed tape recorder. A demonstration to several members proved that not only does it look good, but performs equally well. Unfortunately, as you record the 10 o'clock news of a Sunday and say, if all are agreeable, re-play it early in the morning. This is undesirable as you are unable to get out of bed in time for the morning broadcast. (Who said I only look after myself.)

Owing to unforeseen circumstances 3JB will now be with us a little longer and is looking forward to the new gear expected at the Convention. His interest in the TBR which he replied to be concentrating on 50 Mc. Another member to migrate to this band is TRX, using converted TLE TX. TRX was in the country on 2nd June, when the new beam was finally erected. TRX, after wrestling with the 640, found the sound of work with the 640 channel; still want to sell it! Rufe? Seen driving the latest addition to his large fleet of cars and trucks, and is looking forward to being active late. Max now has assumed the life of a bloated plutocrat, suggest a "Rolls" next.

Walter must be extended to a new member who is making a name for himself. His name is Ella Walker of Burnie, who will be a welcome addition to the North West Division. In respect to 6WZ, who is leaving for England and we trust his travels will be enjoyed. TED still remains an ardent c.w. man, unfortunately Don had a difficult decision to make, either dispose of his radio gear or do without a new cupboard in his room; needless to say he chose the latter. 6WZ now has a 640 Rx, which solved the problem. TDA now an adept photographer, found plenty of time to pursue his activities. TDA is looking forward for a brake down wagon to help him on the way to Swansea. TLD retired from radio, apparently he has never been heard for quite a while, what's barking Len.

Apologies to those chaps not mentioned, owing to shortage of available space, notes are often condensed, so cheers for the present.

## NORTHERN ZONE

Welcome to TOM who made his first appearance on 40 with 2b. sounding phone. However Gordon is investigating the possibilities of a better antenna. 6WZ is looking forward to his Congratulations go out to TLE who won the Tasmanian Section of the Ross Hull Memorial V.H.F. Contest. 6WZ is looking forward to more DX. TRX, who moved into a new house some time ago, is not best of friends. I have an edict: No Ham Radio in the living room or bathroom. Now Henry is glassing in the end of a terrace and is looking forward to a good Ham shack there. After spending a long time on 144 Mc. TAM has succumbed to the lure of 40 metre phone. Recent visitor to the 40 Ham shack was TCA who was recently transferred to southern Tasmania. TRL is also another visiting the north.

TRX has been having trouble and has had to postpone his trip to O-land. However, he has been busy with his 376 Mc. equipment and has been working on it. TRX is not yet up to expectations and Len would like to hear from others who have been experimenting on this band. Len is on holidays—a flying trip to VKS, returning with

some gear for TMC—then a brief trip to Hobart. The shack at TMC has been a hive of activity. Len is now working on a final for 144 Mc. (100 watts) and is also investigating the possibility of suppressor coils. Len is a super-duper, audio amplifier. This was demonstrated to Northern Zone gang with exceptionally good results. Remember, change your time zone on the second Friday of each month and there is always something interesting, so roll up.

## HAMADS

9d. per line, minimum 2/-.

Advertisements under this heading will only be accepted from Institute Members who desire to promote equipment which is their own personal property. Copy must be received by 8th of the month, and remittance must accompany advertisement. Calculation of cost is based on an average of six words a line. Dealers' advertisements not accepted in this column.

**FOR SALE**—Eddystone "640". Condition as new, £60 or best offer. K. Echberg, 14 Glyde St, Mosman Park, W.A.

**FOR SALE**—Miller "RDr" with 10 and 20 m. coils; spare 6AK5, as new, £12/10/-, G.E. Modulation Sets (2), each mod. transformer (120 w. rating), driver and input transformers, £5 per set. 810 with socket, new, £3. 834 tubes R.C.A., new (3), 22/6 each. L. T. Frith, 265 Clarendon St, Sth. Melb. MX 1004.

**FOR SALE**—Talkie Projector, portable, 35 m.m., with film, etc., £50, or exchange for good Receiver. W. A. Brownbill, 71 Gheringap St, Geelong, Vic.

**FOR SALE**—0-1 Ma. meter multi-meter scale, 350 Ma. RF meter. Role speaker transformers, transformers 600/600v. 250 Ma. power chokes, variable Kmitter tank condensers, valves EF50A, 807s, 6J5, 6F8G, VR150, 5U4Gs, etc. c.r.o. tube VCR139A, 80, 70 ohm Telcon cable, 20 yards co-ax cable, glass insulators, vernier dials, 50w. multi-match mod. transformer, 5C speaker, resistors and condensers, switches, etc. Selling cheap. Aerial Wire. Make enquiries may have what you want. Hollins, 91 Walpole St, Kew, E.4, Vic. (WA 9069).

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**SELL**—50 pre-war copies "GST" (1936-1940), 8 copies pre-war "Radio" 1931 edition Admiralty Handbook of Wireless Telegraphy, Radio Handbook 1938 edition, A.R.R.L. Handbook 1942 edition (less cover), A.R.R.L. Antenna Handbook 1942 edition. Lot or separate. Best offer. 25 Panoramic Rd., North Balwyn, E.9, Victoria.

**WANTED**—Coil Units ex Command Rx's (SCR274N equipt), any band. W. A. McLeod, 42 Capon St, Oakleigh, S.E.12, Vic.

**WANTED**—Modulated Oscillator, all wave preferred. State price and condition. L. B. Fisher, 6 Childers Street, Kew, E.4 (Haver 2905).

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A to A Impedance	Audio Tubes A CT A			Join 9 & 10 Con. to 7 & 12	Join 9 & 10 Con. to 8 & 12	Join 9 & 10 Con. to 8 & 11	Join 8 & 9 Con. to 7 & 12	Join 7 & 9 Con. to 7 & 10	Join 8 & 9 Con. to 8 & 10	Join 3 & 4 Con. to 1 & 5	Join 3 & 4 Con. to 2 & 6	Join 2 & 3 Con. to 1 & 6	Join 3 & 4 Con. to 2 & 5	Join 1 & 3 Con. to 4 & 6	Join 7 & 11 Con. to 7 & 8	Join 1 & 5 Con. to 1 & 2			
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2000	2	3-4	5	8600	6350	4300	3620	2150	1070	—	—	—	—	—	200	—			
2000	1	2-5	6	13700	11400	7900	6650	3920	1950	—	—	—	—	—	350	—			
3000	2	3-4	5	13000	9400	6500	5500	3240	1620	—	—	—	—	—	300	—			
3000	1	2-5	6	23500	17000	11800	10000	5900	2950	—	—	—	—	—	520	—			
3600	2	3-4	5	16400	12000	8200	7000	4100	2050	—	—	—	—	—	380	—			
3600	1	2-5	6	29800	21500	15000	12600	7500	3740	—	—	—	—	—	660	—			
4000	2	3-4	5	17400	12500	8650	7300	4300	2160	—	—	—	—	—	400	—			
4000	8	9-10	11	—	—	—	—	—	—	5500	3450	2850	1850	1360	—	250			
5000	2	3-4	5	21600	15700	10800	9150	5400	2700	—	—	—	—	—	500	—			
5000	8	9-10	11	—	—	—	—	—	—	7000	4300	3500	2300	1730	—	300			
6000	1	3-4	6	8600	6350	4300	3620	2140	1070	—	—	—	—	—	200	—			
6000	8	9-10	11	—	—	—	—	—	—	8300	5150	4250	2750	2190	—	370			
6600	1	3-4	6	9500	7000	4750	4000	2350	1180	—	—	—	—	—	220	—			
6600	8	9-10	11	—	—	—	—	—	—	9100	5650	4660	3000	2400	—	405			
7000	1	3-4	6	10000	7300	5050	4280	2500	1250	—	—	—	—	—	230	—			
7000	8	9-10	11	—	—	—	—	—	—	9700	6000	5000	3200	2400	—	430			
8000	1	3-4	6	12000	8400	5800	4900	2900	1440	—	—	—	—	—	270	—			
8000	8	9-10	11	—	—	—	—	—	—	11000	6900	5650	3700	2760	—	500			
9000	1	3-4	6	13000	9400	6500	5500	3200	1620	—	—	—	—	—	300	—			
9000	8	9-10	11	—	—	—	—	—	—	12500	7750	6300	4150	3100	—	550			
9000	7	9-10	12	—	—	—	—	—	—	6200	3900	3200	2050	1550	—	275			
10000	1	3-4	6	14400	10500	7200	6100	3600	1800	—	—	—	—	—	330	—			
10000	8	9-10	11	—	—	—	—	—	—	14000	8600	7100	4600	3450	—	600			
10000	7	9-10	12	—	—	—	—	—	—	6900	4300	3500	2300	1740	—	310			
12000	1	3-4	6	17400	12500	8700	7250	4320	2150	—	—	—	—	—	400	—			
12000	7	9-10	12	—	—	—	—	—	—	8300	5150	4250	2750	2070	—	370			
14000	7	9-10	12	—	—	—	—	—	—	9700	6000	4900	3200	2440	—	430			
16000	7	9-10	12	—	—	—	—	—	—	11000	6900	5600	3700	2780	—	560			
18000	7	9-10	12	—	—	—	—	—	—	12500	7750	6300	4150	3140	—	550			

List No.	Audio Watts	R.F. Input Watts	Max. Sec. Current	Overall Size W. H.	Weight lbs. ozs.	Nett Price Inc. Tax
UM1	30	60	120 Ma.	3 3/8" x 3 1/2" x 3 3/8"	5 8	£5/8/6
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*The most advanced*  
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The new Aegis 4-band, handwound tuning unit illustrated at the right is definitely the answer for the Amateur who desires to build his own communication receiver. Here are the plain facts of this latest Aegis triumph—

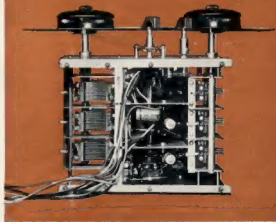
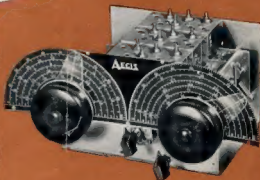
4 Wave Bands		Band Spread—5 Bands	
550 Kc. — 1500 Kc.	3.5	4.0 Mc. 80 Metres	
1500 Kc. — 4 Mc.	6.9	7.3 Mc. 40 Metres	
4 Mc. — 11 Mc.	14.0	14.4 Mc. 20 Metres	
11 Mc. — 30 Mc.	20.5	22.0 Mc. 15 Metres	
	27.0	30.0 Mc. 10 Metres	

Actually constructed in three sub-sections comprising R.F., Converter and Oscillator stages. Finally assembled in one unit, which incorporates Band-Sel and Band-tuned Condensers, together with two Slow Motion Drive Assemblies 55/3 and directly calibrated Plastic Dial. Valve Sockets for R.F. (6SK7GT), Mixer (6AC7), and separate Oscillator (6SK7GT) stages are already wired. Capacitor air trimmers are used throughout, and the six section "Oak" Type Switch includes shorting banks for all coils not in use. Aerial Trimmer is brought out to front panel with 1/4-inch shaft. Screws for fine core adjustment in all coils are readily accessible from top of unit, as are also the Trimmer Screws.

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